CONTENTS OF VOLUME 90

Volume 90 Nos. 1/2 July 1996

PREFACE VII
ACKNOWLEDGEMENTS IX

PART I
CONFERENCE SUMMARY STATEMENT

R.W. BROCKSEN, W. CHOW, E.D. DAUGHERTY, Y.G. MUSSALLI, J. WISNIEWSKI and A.L. WOODIS / Clean Water: Factors that Influence its Availability, Quality and its Use: Summary of the International Water Conference 3–7

PART II
WATER RESOURCE OVERVIEWS

S. PECK / Managing and Protecting Our Water Resources 11–20
R. BROCKSEN, W. CHOW and K. CONNOR / Addressing Electric Utility Surface Water Challenges 21–29
C. LOHSE-HANSON / Lake Superior Binational Program: The Role of Electric Utilities 31–40
J.A. VEIL and D.O. MOSES / Consequences of Proposed Changes to Clean Water Act Thermal Discharges 41–52

PART III
ECOLOGICAL / HEALTH RISKS

c. SEIGNEUR, E. CONSTANTINOU and L. LEVIN / Multipathway Health Risk Assessment of Power Plant Water Discharges 55–64
C.W. CHEN, J. HERR, R.A. GOLDSTEIN, F.J. SAGONA, K.E. RYLANT and G.E. HAUSER / Watershed Risk Analysis Model for TVA's Holston River Basin 65–70
S. FERSON, L.R. GINZBURG and R.A. GOLDSTEIN / Inferring Ecological Risk from Toxicity Bioassays 71–82
C. ARQUIETT, M. GERKE and I. DATSKOU / Evaluation of Contaminated Groundwater Cleanup Objectives 83–92
G.L. BOWIE, J.G. SANDERS, G.F. RIEDEL, C.C. GILMOUR, D.L. BREITBURG, G.A. CUTTER and D.B. PORCELLA / Assessing Selenium Cycling and Accumulation in Aquatic Ecosystems 93–104
D.W. RODGERS, J. SCHRÖDER and L. VEREECKEN SHEEHAN / Comparison of *Daphnia Magna*, Rainbow Trout and Bacterial-based Toxicity Tests of Ontario Hydro Aquatic Effluents 105–112
G.P. BEHRENS, D.A. ORR, R.G. WETHEROLD and B.T. O'NEIL / Use of the Pisces Database: Power Plant Aqueous Stream Compositions 113–122
C.S. LEW, W.B. MILLS, K.J. WILKINSON and S.A. GHERINI / RIVRISK: A Model to Assess Potential Human Health and Ecological Risks from Chemical and Thermal Releases into Rivers 123–132
I. DATSKOU and K. NORTH / Risks Due to Groundwater Contamination at a Plutonium Processing Facility 133–141

Water, Air, and Soil Polution **90**: 565–567, 1996.

K. LINDQUIST, M. MCGEE and L. COLE / TVA-EPRI River Resource Aid (Terra) Reservoir and Power Operations Decision Support System 143–150

PART IV
CONTROL STRATEGIES

M. ZIMMERMAN and C. MURPHY / Best Management Practices for Storm Water at Industrial Facilities 153–162
R.F. MADDALONE / Coal Sorbent System for the Extraction and Disposal of Heavy Metals and Organic Compounds 163–171
B. NOTT, K.A. SELBY, T. BRICE, D. GOLDSTROHM, D. MORRIS, S.R. PATE, D. SMAY and T. SPAULDING / The EPRI State-of-the-Art Cooling Water Treatment Research Project: A Tailored Collaboration Program 173–181
K.A. SELBY, P.R. PUCKORIUS and K.R. HELM / The Use of Reclaimed Water in Electric Power Stations and Other Industrial Facilities 183–193
R.E. BROSHEARS / Reactive Solute Transport in Acidic Streams 195–204
J.W. GOODRICH-MAHONEY / Constructed Wetland Treatment Systems Applied Research Program at the Electric Power Research Institute 205–217
D.W. RODGERS, D.W. EVANS and L. VEREECKEN SHEEHAN / Toxicity Reduction of Ontario Hydro Radioactive Liquid Waste 219–229
I. MOCH, F. DEPENBROCK and Y. MUSSALLI / Electricity and Water Desalination: Separate Sites Offer Value 231–241

PART V
MEASURING QUALITY

R.F. MADDALONE, J.W. SCOTT, J.K. RICE and B.R. NOTT / Impact on Discharge Monitoring of Recent EPA Initiatives in Water Quality Measurement 245–255
D.K. NORDSTROM / Trace Metal Speciation in Natural Waters: Computational vs. Analytical 257–267
M.H. MACH, B. NOTT, J.W. SCOTT, R.F. MADDALONE and N.T. WHIDDON / Metal Speciation: Survey of Environmental Methods of Analysis 269–279
A.J. HOROWITZ, K.R. LUM, J.R. GARBARINO, G.E.M. HALL, C. LEMIEUX and C.R. DEMAS / The Effect of Membrane Filtration on Dissolved Trace Element Concentrations 281–294
N.V. EKKAD and C.O. HUBER / Residual Sulfite After Dechlorination of Water 295–300

PART VI
WATER RESOURCES

G.H. LEAVESLEY, S.L. MARKSTROM, M.S. BREWER and R.J. VIGER / The Modular Modeling System (MMS) – The Physical Process Modeling Component of a Database-Centered Decision Support System for Water and Power Management 303–311
J.H. COPELAND / Validation and Sensitivity of a Convective Precipitation Model for Mountainous Areas 313–320
J.M. NELSON / Predictive Techniques for River Channel Evolution and Maintenance 321–333
K.L. BRUBAKER and A. RANGO / Response of Snowmelt Hydrology to Climate Change 335–343

Conference Participants 345–350
Author Index 351
Key Word Index 353–354

CONTENTS OF VOLUME 90

Volume 90 Nos. 3/4 August 1996

CLAIRE LEMIEUX and KEN R. LUM / Sources, Distribution and Transport of Atrazine in the St. Lawrence River (Canada) 355–374

WILLIAM SHOTYK / Natural and Anthropogenic Enrichments of As, Cu, Pb, Sb, and Zn in Ombrotrophic versus Minerotrophic Peat Bog Profiles, Jura Mountains, Switzerland 375–405

FUZHU ZHANG, JINGYANG ZHANG, HONGRUI ZHANG, NORIO OGURA and AKIKUNI USHIKUBO / Chemical Composition of Precipitation in a Forest Area of Chongqing, Southwest China 407–415

C. BRACKHAGE, J. HAGEMEYER, S.W. BRECKLE and J. GRESZTA / Radial Distribution Patterns of Cd and Zn in Stems of Scots Pine (*Pinus Sylvestris* L.) Trees Analyzed 12 Years After a Contamination Event 417–428

THOMAS G. HUNTINGTON / Predicting Watershed Acidification Under Alternate Rainfall Conditions 429–450

ASMARE ATALAY and KEON-JOONG HWANG / Extraction of Light Hydrocarbons from Soil 451–468

R. FRANCE and M. COQUERY / Lead Concentrations in Lichens from the Canadian High Arctic in Relation to the Latitudinal Pollution Gradient 469–474

CELIA A. EVANS and TOM C. HUTCHINSON / Mercury Accumulation in Transplanted Moss and Lichens at High Elevation Sites in Quebec 475–488

F.M. AL-RUWAIH / Hydrogeochemical Variation of Carbonate Aquifer, Al-Sulaibiya, Kuwait 489–505

DIRK WALLSCHLÄGER, MADHUKAR V.M. DESAI and ROLF-DIETER WILKEN / The Role of Humic Substances in the Aqueous Mobilization of Mercury From Contaminated Floodplain Soils 507–520

T.W. BERGER, G. GLATZEL and A. KASPER / The Influence of Basic Aerosols on Throughfall Fluxes of Sulfate, Ammonium and Nitrate in Three Oak Stands Along a Distance Gradient From a Lime Quarry 521–530

S. DUDKA, R. PONCE-HERNANDEZ, G. TATE and T.C. HUTCHINSON / Forms of Cu, Ni, and Zn in Soils of Sudbury, Ontario and the Metal Concentrations in Plants 531–542

M.C. CHUAN, G.Y. SHU and J.C. LIU / Solubility of Heavy Metals in a Contaminated Soil: Effects of Redox Potential and pH 543–556

FERIT KARGIN / Seasonal Changes in Levels of Heavy Metals in Tissues of *Mullus Barbatus* and *Sparus Aurata* Collected from Iskenderun Gulf (Turkey) 557–562

Instructions for Authors 563–564

Volume Contents 565–567